

REMARKS/ARGUMENTS

Claims 25-33 were pending and rejected. With the Amendment, claim 25 is amended and claim 80 is added. The remaining claims are unchanged in the application. Reconsideration of this Application and entry of this Amendment is respectfully requested.

35 U.S.C. §112 Rejections

The Examiner rejected claims 25-33 under 35 U.S.C. 112, first and second paragraphs, as failing to comply with the written description requirement and as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More particularly, the rejection concerns the amended feature “prior to substantial boiling” in claim 25. The Office Action states that the specification does not provide support for the amended feature thus adding new matter, and the term “substantial” is a relative term and renders the claim indefinite.

With this amendment, the features related to “prior to substantial boiling” has been amended to include the features of, “vibration occurs during phase-transition but prior to boiling of water in the organic tissue.” Support for this amendment is found throughout the specification and, in particular, at page 3, lines 24-25, where it states, “If the temperature at the ablation site exceeds 100 C, the water will change phase, boil and may result in an audible “steam pop” within the tissue. The specification also provides support at page 3, lines 29-31, where it states, “before a steam pop, there is a mechanical vibration within the tissue (suspected to be caused by the phase-transition of water, which may create microbubbles within the tissue).” Accordingly, Applicants respectfully request that the rejection under 35 U.S.C. 112, first and second paragraph be withdrawn.

35 U.S.C. §103 Rejections

The Examiner rejected claims 25-33 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,733,281 to Nardella. The Office Action states that Nardella teaches the features of the claims but does not specifically disclose reducing power prior to substantial boiling. The Office Action sets out, however, “that one skilled in the art, aware of such serious issues, would associate both boiling and steam pops as indicative of excess energy.

Claim 25 is an independent claim and has been amended. Claim 25 is directed toward “A method of ablating organic tissue.” Claim 25 includes the features of “sensing with a sensor positioned adjacent to the electrode the vibration of the organic tissue being ablated wherein the vibration is self-generated in the organic tissue in response to the ablation” and “reducing power to the electrode when the vibration reaches a given value.” Claim 25 also includes the features of “vibration occurs during phase-transition but prior to boiling of water in the organic tissue.”

Applicants submit that the prior art does not make obvious a modification to Nardella to obtain the amended claims. In particular, Nardella is concerned with detecting vibrations resulting from boiling or steam. The present claims set forth “reducing power to the electrode when the vibration reaches a given value,” wherein “vibration occurs during phase-transition but prior to boiling of water in the organic tissue.” The prior art does not teach detecting such vibrations. Instead, the prior art concerns itself with detecting vibrations related to boiling. The prior art does not teach and does not make obvious detecting vibrations other than boiling of water. Accordingly, Applicants submit claim 25 is patentably distinguishable from the prior art, and respectfully request removal of the rejection based on 35 U.S.C. 103(a).

Claims 26-33 depend from claim 25, which has been shown to be patentable. By virtue of their dependency to a patentable claim, dependent claims 26-33 are also patentably distinguishable from the prior art. Applicants respectfully request removal of the rejection of the dependent claims based on 35 U.S.C. 103(a).

New Independent Claim 80

With this Amendment and Response, independent claim 80 is added to the application. Claim 80 finds support in the drawings and specification such as at Figure 7 and on page 18, lines 25-27. Applicants submit that claim 80 is patentably distinguishable from the prior art of record because the prior art does not teach or make obvious a method that “determining a difference in vibration between the initial state of vibration and the vibration self-generated in the organic tissue in response to the ablation.” Applicants respectfully request favorable action on claim 80.

Conclusion

For the foregoing reasons, Applicant believes all the pending claims are in condition for allowance and should be passed to issue. The Commissioner is hereby authorized to charge any additional fees which may be required under 37 C.F.R. 1.17, or credit any overpayment, to Deposit Account No. 01-2525. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at telephone (612) 573-2010

Respectfully submitted,

/Rudolph P. Hofmann/

Rudolph P. Hofmann

Registration No. 38,187

Attorney for Applicant

Medtronic Vascular, Inc.
3576 Unocal Place
Santa Rosa, CA 95403
Facsimile No.: (707) 543-5420